

Section 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: CARLINE®
Product Code: 158-01
UFI Code: 5R25-AJQ7-T40E-3YD9

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product Use: Fungicide

1.3 Details of the supplier of the safety data sheet

Company: Life Scientific Ltd,
Block 4,
Belfield Office Park,
Beech Hill Road,
Dublin 4,
Ireland
Telephone: +353 (0) 1 2832024
Email: info@lifescientific.com
Web: www.lifescientific.com

1.4 Emergency contact information

In case of Emergency: Tel. NHS 111

Section 2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) No. 1272/2008

Acute toxicity	Category 4	H302
Skin sensitisation	Category 1	H317
Eye irritation	Category 2	H319
Specific Target Organ Toxicity (STOT) SE	Category 3	H335
Aquatic Acute	Category 1	H400
Aquatic Chronic	Category 1	H410

2.2 Label Elements

Labelling according to Regulation (EU) 1272/2008

Hazardous components which must be listed on the label:

- Bixafen
- Prothioconazole

Hazard Pictograms:



Signal Word:

Warning

Hazard Phrases:

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

H335 May cause respiratory irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Phrases:

P102 Keep out of reach of children.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309+P311 If exposed or if you feel unwell: Call a POISON CENTRE or doctor/physician.
P391 Collect spillage.
P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

Other Phrases:

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.
SP 1 Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).
SPe3 To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirements.

2.3 Other Hazards

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

No substances fulfil the criteria set out in Annex II, Part A of the REACH Regulation (EC) No 1907/2006.

3.2 Mixtures

Chemical Name	CAS	EC	Classification (Regulation (EC) No 1272/2008)	Concentration (% w/w)
Bixafen	581809-46-3	-	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 M-Factor: 10 (acute)	5.9
Prothioconazole	178928-70-6	-	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	19.6
2-Ethylhexanol propylene ethyleneglycol ether	64366-70-7		Acute Tox. 4; H332 Aquatic Chronic 3, H412	>1 - <25
N,N-Dimethyl decanamide	14433-76-2	-	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 3, H412	>=25

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4. FIRST AID MEASURES

4.1 Description of first aid measures

General information:	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
Inhalation:	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control centre immediately.
Ingestion:	Rinse mouth. Do NOT induce vomiting. Call a physician or poison control centre immediately.
Skin contact:	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control centre immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms:	No symptoms known or expected
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4.3 Indication of any immediate medical attention and special treatment needed

Notes to physicians:	Treat symptomatically, there is no specific antidote. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable.
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Section 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable:	High volume water jet.

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following may be released: Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NOx), Sulphur oxides

5.3 Advice for firefighters

In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Further information

Contain the spread of the firefighting media. Do not allow run-off from firefighting to enter drains or water courses.

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

6.2 Environmental precautions

Do not allow to get into surface water, drains and ground water. If spillage enters drains leading to sewage works inform local water company immediately. If spillage enters rivers or watercourses, inform the Environment Agency.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling

No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition.

Hygiene measures

Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary, take a shower. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Protect from frost. Keep away from direct sunlight.

Advice on common storage

Keep away from food, drink and animal feeding stuffs.

7.3 Specific end use(s)

Refer to the label and/or leaflet.

Section 8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

Component / CAS-No.	Exposure Limit	Value Type	Source
Bixafen (581809-46-3)	0.6 mg/m ³	TWA	Supplier
Prothioconazole (178928-70-6)	1.4 mg/m ³	SK-ABS	Supplier

8.2 Exposure controls

Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection

Wear respirator with an organic vapour and gas filter mask (protection factor 10) conforming to EN140 type A or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Hand protection

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

Material:	Nitrile rubber
Rate of permeability:	> 480 min
Glove thickness:	> 0.4 mm
Protective index:	Class 6
Directive:	Protective gloves complying with EN 374.

Eye protection

Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection

Wear standard coveralls and Category 3 Type 4 suit. If there is a risk of significant exposure, consider a higher protective type suit.

Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form:	Liquid, clear to slightly turbid
Colour:	Brown
Odour:	Characteristic
Odour Threshold:	No data available
Melting point/range:	No data available
Boiling Point:	No data available
Flammability:	No data available
Upper explosion limit:	No data available
Lower explosion limit:	No data available
Flash point:	> 100 °C
Auto-ignition temperature:	No data available
Ignition temperature:	375 °C
Self-accelerating decomposition temperature (SADT)	No data available
pH:	3.0 - 5.0 (1 %) (23 °C) (deionized water)
Viscosity, dynamic:	No data available
Viscosity, kinematic:	No data available
Water solubility:	Emulsifiable
Partition coefficient:	Bixafen: log Pow: 3.3 (40 °C)
n-octanol/water	Prothioconazole: log Pow: 3.82 (20 °C) (pH 7)
	2-Ethylhexanol propylene ethyleneglycol ether: No data available
	N,N-Dimethyldecanamide: log Pow: 2.46
Vapour pressure:	No data available
Density:	ca. 1.02 g/cm ³ (20 °C)
Relative density:	No data available
Relative vapour density:	No data available

Assessment nano particles: This substance/ mixture does not contain nanoforms.

Particle size: No data available.

9.2 Other Information

Explosivity: Not explosive

Oxidizing properties: No oxidizing properties

Evaporation rate: No data available

Other physico-chemical Properties: Further safety related physical-chemical data are not known.

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical Stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions when stored and handled according to prescribed instructions.

10.4 Conditions to avoid

Extremes of temperature and direct sunlight.

10.5 Incompatible material

Store only in the original container

10.6 Hazardous decomposition products

No decomposition products expected under normal conditions of use.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	LD ₅₀ oral rat > 300 - < 2,000 mg/kg
Acute inhalation toxicity:	ATE (Mix): > 5 mg/l
	Calculation method
	During intended and foreseen applications, no respirable aerosol is formed.
	Irritating to respiratory system.
	The value mentioned relates to N,N-dimethylacetamide.
Acute dermal toxicity:	LD ₅₀ dermal rat: > 2000 mg/kg.
Skin corrosion/irritation:	No skin irritation. (Rabbit)
Serious eye damage/eye irritation:	Irritating to eyes. (Rabbit)
Respiratory or skin sensitisation:	Skin: Sensitising (Mouse)
	OECD Test Guideline 429, local lymph node assay

Assessment STOT Specific target organ toxicity – single exposure

Bixafen: Based on available data, the classification criteria are not met.
 Prothioconazole: Based on available data, the classification criteria are not met.
 2-Ethylhexanol propylene ethyleneglycol ether: Based on available data, the classification criteria are not met.
 N,N-Dimethyldecan-1-amide: May cause respiratory irritation.

Assessment STOT Specific target organ toxicity – repeated exposure

Bixafen did not cause human relevant specific target organ toxicity in experimental animal studies.
 Prothioconazole did not cause specific target organ toxicity in experimental animal studies.
 2-Ethylhexanol propylene ethyleneglycol ether: Based on available data, the classification criteria are not met.
 N,N-Dimethyldecanamide did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Bixafen was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
 Prothioconazole was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.
 2-Ethylhexanol propylene ethyleneglycol ether is not considered mutagenic.
 N,N-Dimethyldecanamide was not genotoxic in a battery of in vitro tests.

Assessment carcinogenicity

Bixafen was not carcinogenic in lifetime feeding studies in rats and mice.
 Prothioconazole was not carcinogenic in lifetime feeding studies in rats and mice.
 2-Ethylhexanol propylene ethyleneglycol ether: Based on available data, the classification criteria are not met.
 N,N-Dimethyldecanamide is not considered carcinogenic.

Assessment toxicity to reproduction

Bixafen did not cause reproductive toxicity in a two-generation study in rats.
 Prothioconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Prothioconazole is related to parental toxicity.

2-Ethylhexanol propylene ethyleneglycol ether: Based on available data, the classification criteria are not met.
N,N-Dimethyldecanamide is not considered a reproductive toxicant at non-maternally toxic dose levels.

Assessment developmental toxicity

Bixafen did not cause developmental toxicity in rats and rabbits.

Prothioconazole caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Prothioconazole are related to maternal toxicity.

2-Ethylhexanol propylene ethyleneglycol ether: This information is not available.

N,N-Dimethyldecanamide did not cause developmental toxicity in rats and rabbits.

Further information

No further toxicological information is available.

11.2 Information on other hazards

Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Section 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish:	LC ₅₀ (Oncorhynchus mykiss (rainbow trout))1.34 mg/l Exposure time: 96 h
Toxicity to aquatic invertebrates:	EC ₅₀ (Daphnia magna (Water flea))4.98 mg/l Exposure time: 48 h
Toxicity to aquatic plants:	IC ₅₀ (Raphidocelis subcapitata (freshwater green alga)) 3.81 mg/l Growth rate; Exposure time: 72 h EC ₁₀ (Skeletonema costatum)0.01427 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient prothioconazole. ErC ₅₀ (Skeletonema costatum)0.03278 mg/l Exposure time: 72 h The value mentioned relates to the active ingredient prothioconazole.

12.2 Persistence and degradability

Biodegradability:

Bixafen:	Not rapidly biodegradable
Prothioconazole:	Not rapidly biodegradable
2-Ethylhexanol propylene ethyleneglycol ether:	Not readily biodegradable
N,N-Dimethyldecanamide:	Rapidly biodegradable

Koc:

Bixafen:	Koc: 3869
Prothioconazole:	Koc: 1765
2-Ethylhexanol propylene ethyleneglycol ether:	No data available

12.3 Bioaccumulative potential

Bixafen:	Bioconcentration factor (BCF) 695 Does not bioaccumulate.
Prothioconazole:	Bioconcentration factor (BCF) 19 Does not bioaccumulate.
2-Ethylhexanol propylene ethyleneglycol ether:	No data available.
N,N-Dimethyldecanamide:	Does not bioaccumulate.

12.4 Mobility in soil

Bixafen:	Slightly mobile in soils
Prothioconazole:	Slightly mobile in soils
2-Ethylhexanol propylene ethyleneglycol ether:	No data available
N,N-Dimethyldecanamide:	Slightly mobile in soils

12.5 Results of PBT and vPvB assessment

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

12.6 Endocrine disrupting properties

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

None.

Section 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant. Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

Contaminated packaging

Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times. Add washings to sprayer at time of filling. Dispose of empty and cleaned packaging safely. Follow advice on product label and/or leaflet.

Section 14. TRANSPORT INFORMATION

Transport the product in accordance with the provisions of ADR for road, RID for rail, IMDG for the sea, and ICAO / IATA for air transport

14.1 UN Number

3082

14.2 UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (BIXAFEN SOLUTION).

14.3 Transport hazard class(es)

9.

14.4 Packing group

III.

14.5 Environmental hazards

Marine Pollutant: Yes
Environmentally Hazardous Yes
Mark:

Emergency action code: 3Z

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to IMO instruments

No transport in bulk according to the IBC Code

Section 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture

UK and Northern Ireland Regulatory References

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

Transport

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No 1348)
Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997 (SI 1997 No 2367)
Air Navigation Dangerous Goods Regulations 2002 (SI 2002 No 2786)

Supply and Use

Chemical (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716)
Chemical (Hazard Information and Packaging for Supply) (Northern Ireland) Regulations 2009
Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No 2677)
EH40 Occupational Exposure Limits - Table 1 List of approved workplace exposure limits
Control of Pesticide Regulations 1986
Dangerous Substances and Explosive Atmospheres Regulations 2002

Waste Treatment

Environmental Protection Act 1990, Part II
Environmental Protection (Duty of Care) Regulations 1991
The Waste Management Licensing Regulations 1994 (as amended)
Hazardous Waste Regulations 2005 (Replacing Special Waste Regulations 1996 as amended)
Landfill Directive
Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)
Water Resources Act 1991
Anti-Pollution Works Regulations 1999

Further information

WHO-classification: III (Slightly hazardous)

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out on this mixture by the supplier.

Section 16. OTHER INFORMATION

Full list of relevant hazard and precautionary statements that were not given in full in sections 2 and 3.

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

The information presented in this document is accurate to the best of our knowledge at the date of its publication. However, the information given is designed only as a guide for the methods of handling, storage, use, transportation and disposal of the product and is not considered a warranty or quality specification. Life Scientific Limited cannot be held responsible for any loss or damage resulting from the handling, storage, use or disposal of the product. The information contained in this document relates only to this specific product.

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First Issuance: 26/02/2026
Current Issuance: 26/02/2026